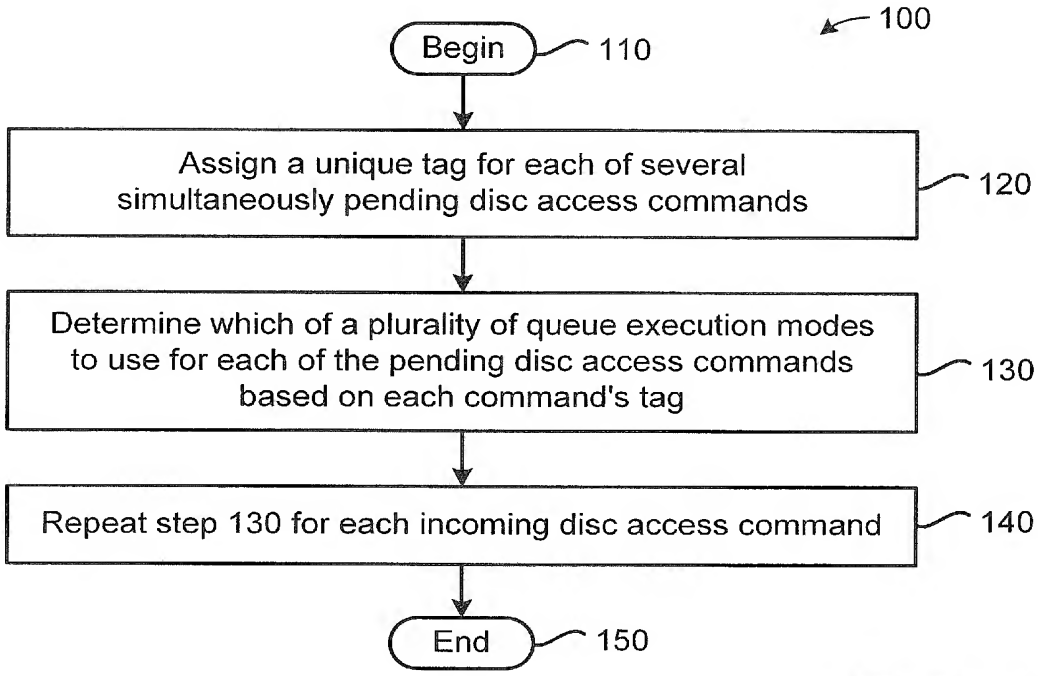

100
Begin
110
Assign a unique tag for each of several simultaneously pending disc access commands
120
Determine which of a plurality of queue execution modes to use for each of the pending disc access commands based on each command's tag
130
Repeat step 130 for each incoming disc access command
140
End
150

FIG. 1

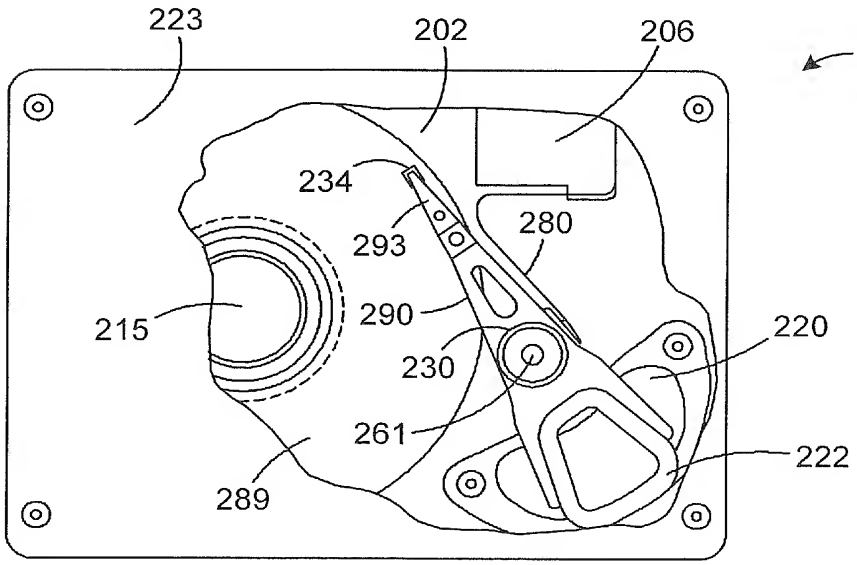

223
202
206
200
234
293
280
215
290
220
230
261
222
289

FIG. 2

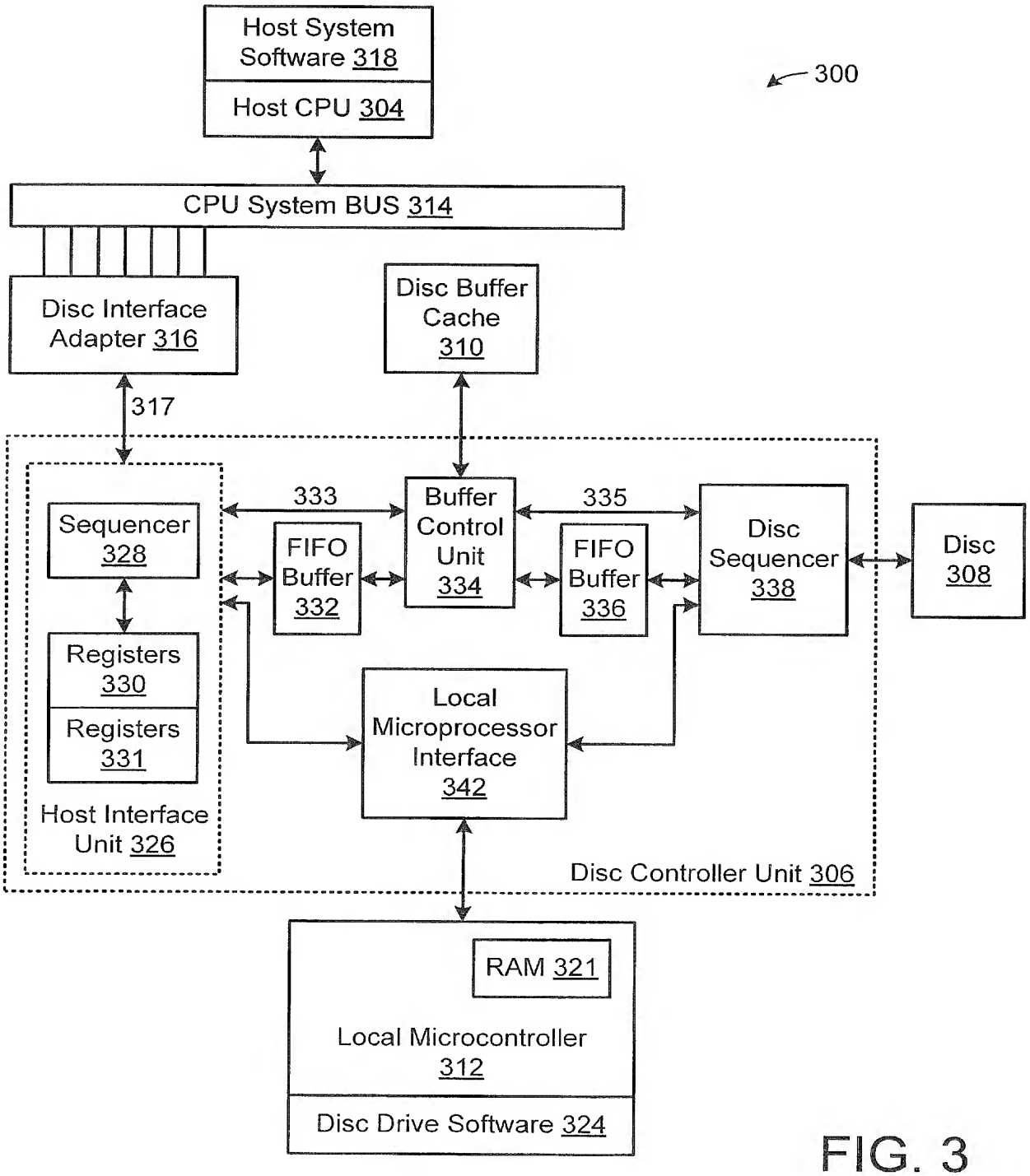

Host System Software 318
Host CPU 304
300
CPU System BUS 314
Disc Interface Adapter 316
Disc Buffer Cache 310
317
333
335
Sequencer 328
FIFO Buffer 332
Buffer Control Unit 334
FIFO Buffer 336
Disc Sequencer 338
Disc 308
Registers 330
Registers 331
Local Microprocessor Interface 342
Host Interface Unit 326
Disc Controller Unit 306
RAM 321
Local Microcontroller 312
Disc Drive Software 324

FIG. 3

FEAT	0xEE	Queue Attributes 405
SC	0x00 – 0x10	Priority Queues 415
	0x11	Abort Handling Queue 425
	0x12	AV Attribute Queue 435
LL	0-31	LBA Low 445
LM	0-31	LBA Mid 455
LH		LBA High 465
Dev		Device 475
Com	0xEF	Command 485

400

FIG. 4

575

Feat	SC	LL	LM	LH	Dev	Cmd	
0xEE	0x00	0x00	0x05	0x00	0xA0	0xEF	510
0xEE	0x01	0x06	0x0F	0x00	0xA0	0xEF	520
0xEE	0x11	0x0E	0x17	0x00	0xA0	0xEF	530
0xEE	0x12	0x18	0x1F	0x00	0xA0	0xEF	540

500

FIG. 5

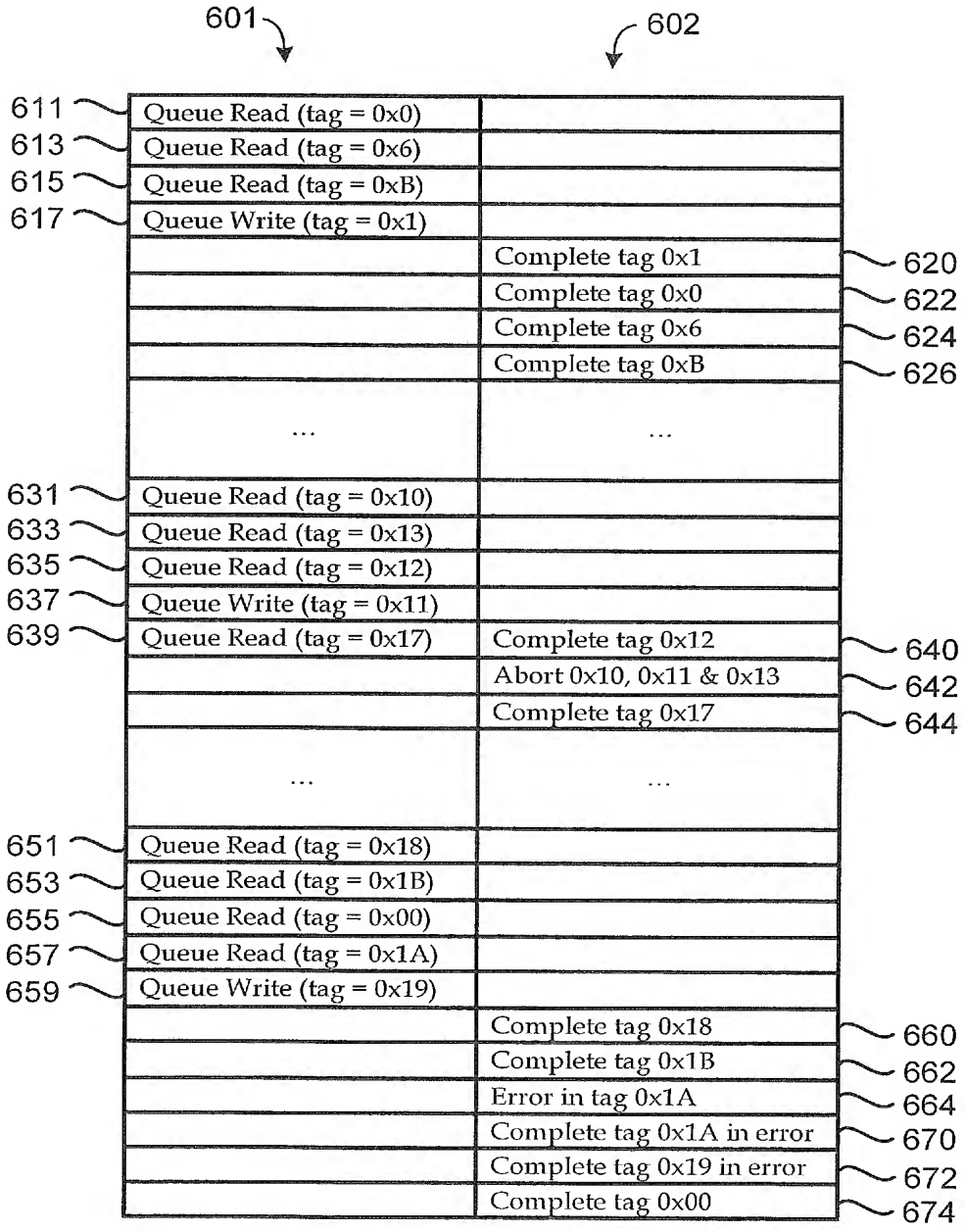
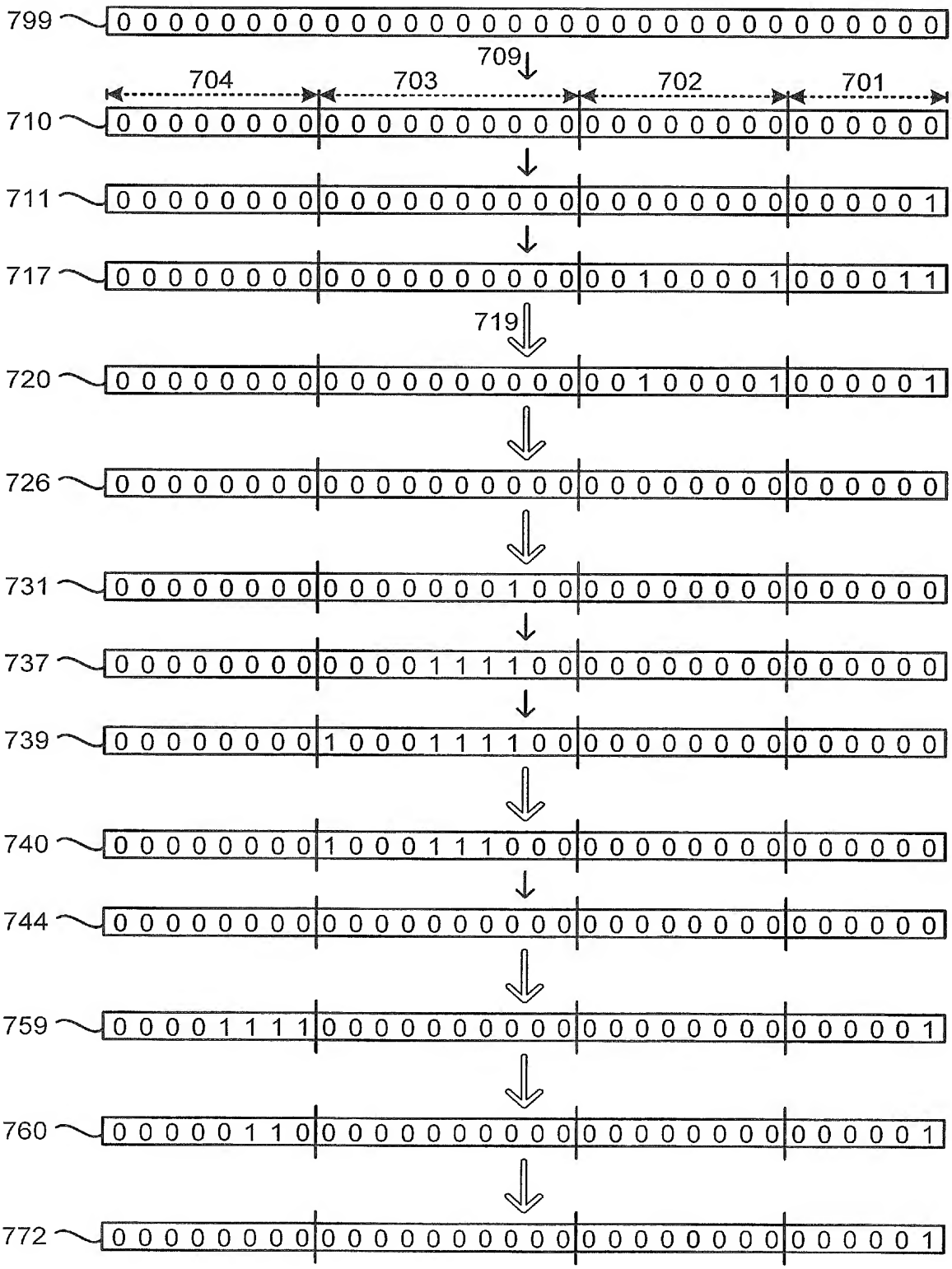

601
602
611
Queue Read (tag = 0x0)
613
Queue Read (tag = 0x6)
615
Queue Read (tag = 0xB)
617
Queue Write (tag = 0x1)
Complete tag 0x1
620
Complete tag 0x0
622
Complete tag 0x6
624
Complete tag 0xB
626
...
...
631
Queue Read (tag = 0x10)
633
Queue Read (tag = 0x13)
635
Queue Read (tag = 0x12)
637
Queue Write (tag = 0x11)
639
Queue Read (tag = 0x17)
Complete tag 0x12
640
Abort 0x10, 0x11 & 0x13
642
Complete tag 0x17
644
...
...
651
Queue Read (tag = 0x18)
653
Queue Read (tag = 0x1B)
655
Queue Read (tag = 0x00)
657
Queue Read (tag = 0x1A)
659
Queue Write (tag = 0x19)
Complete tag 0x18
660
Complete tag 0x1B
662
Error in tag 0x1A
664
Complete tag 0x1A in error
670
Complete tag 0x19 in error
672
Complete tag 0x00
674

FIG. 6

700

FIG. 7


799
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
709
704
703
702
701
710
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
711
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
717
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0 0 1 1
719
720
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 1
726
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
731
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
737
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0
739
0 0 0 0 0 0 0 0 1 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
740
0 0 0 0 0 0 0 0 1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
744
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
759
0 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
760
0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1
772
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1

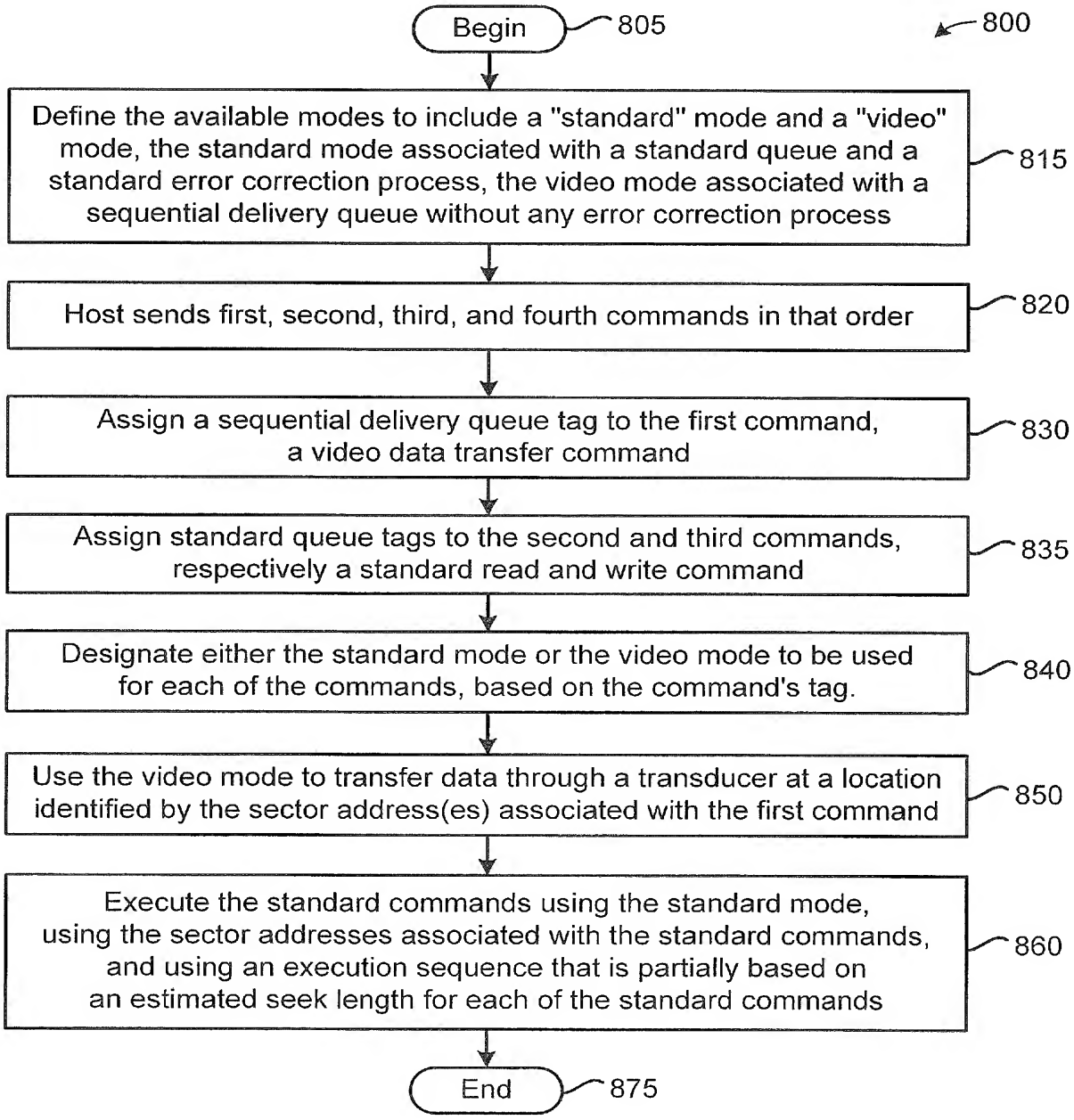

Begin
805
800
Define the available modes to include a "standard" mode and a "video" mode, the standard mode associated with a standard queue and a standard error correction process, the video mode associated with a sequential delivery queue without any error correction process
815
Host sends first, second, third, and fourth commands in that order
820
Assign a sequential delivery queue tag to the first command, a video data transfer command
830
Assign standard queue tags to the second and third commands, respectively a standard read and write command
835
Designate either the standard mode or the video mode to be used for each of the commands, based on the command's tag.
840
Use the video mode to transfer data through a transducer at a location identified by the sector address(es) associated with the first command
850
Execute the standard commands using the standard mode, using the sector addresses associated with the standard commands, and using an execution sequence that is partially based on an estimated seek length for each of the standard commands
860
End
875

FIG. 8